

REMARKS

Claims 1, 33 and 63 have been amended, and claim 64 has been cancelled without prejudice or disclaimer of the subject matter recited therein. Claims 1-6, 8, 14-21, 23, 24, 26-29, 33, 37-41, 47, 63 and 65 are pending and under consideration. Claims 1, 63 and 65 are the independent claims. No new matter is presented in this Amendment.

ALLOWABLE SUBJECT MATTER:

Claim 65 is allowed.

REJECTIONS UNDER 35 U.S.C. §112:

Claims 1-6, 8, 14-21, 23-24, 26-29, 33, 37-41, 47, 63-64 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Office Action notes that it is unclear what the difference is between "a conductive polymer film," and "a polymer film incorporated with a conductive agent," as recited in independent claims 1, 63 and 64.

Applicants respectfully traverse this rejection for at least the following reasons.

The specification clearly describes the difference between these two features, at least at paragraphs [0019] and [0020].

As noted at paragraph [0019] of the specification, the polymer film incorporated with a conductive agent is a polymer film having a conductive agent dispersed therein and examples of the conductive agent may include a conductive metal oxide such as tin oxide, tin phosphate (SnPO_4), titanium oxide, or a perovskite material (LaSrCoO_3 , LaSrMnO_3), a metal such as tin, copper, or nickel, and a carbonaceous conductive material such as graphite or carbon black.

Meanwhile, a conductive polymer film includes elements which are different from those of the polymer film incorporated with the conductive agent.

Accordingly, Applicants respectfully assert that the specification is sufficiently clear in describing the distinction between "the conductive polymer film" and "the polymer film incorporated with a conductive agent."

Therefore, Applicants respectfully request that the rejection under 35 U.S.C. § 112,

second paragraph, of claims 1 and 63 be withdrawn.

Applicants also note that claim 64 has been cancelled without prejudice or disclaimer of the subject matter recited therein. Accordingly, the rejection of claim 64 is moot.

REJECTIONS UNDER 35 U.S.C. §102:

Claims 1-3, 6, 8, 19-21, 23-24, 26, 29, 41, 64 are rejected under 35 U.S.C. §102(b) as being anticipated by Tanaka (U.S. Patent 5,462,820).

Applicants respectfully traverse this rejection for at least the following reasons.

Regarding the rejection of independent claim 1, it is noted that claim 1 recites a negative electrode for a lithium secondary battery comprising: a substrate having a mean roughness of 30 to 4000 Å; and a lithium layer coated on the substrate, wherein the substrate is selected from the group consisting of a conductive polymer film, a polymer film deposited with metal, and a polymer film incorporated with a conductive agent, wherein the polymer film is at least one selected from the group consisting of polyester, polyolefin, polyamide, polycarbonate, polyacrylate, and a copolymer or a mixture thereof.

Tanaka discloses a non-aqueous battery comprising a positive electrode, a negative electrode and a non-aqueous electrolyte (abstract). Tanaka further discloses that the electrode sheet is pressed and the support is treated, where the surface-roughness of the support is on the order of 0.1 to 10µm (column 6, lines 14-15). Tanaka also discloses that the battery comprises forming a positive electrode by mixing LiCoO₂, conductive agents and a binder, and applying the mixture to an aluminum foil current collector (column 16, lines 3-11) and forming a negative electrode by mixing LiCoVO₄ with conductive agents and a binder, and applying the mixture to a copper foil current (column 16, lines 16-25).

Accordingly, Tanaka discloses a battery including a negative electrode having a metal foil substrate, and a lithium layer coated on the substrate. As noted above, independent claim 1 recites a substrate selected from the group consisting of a conductive polymer film, a polymer film deposited with metal, and a polymer film incorporated with a conductive agent. Tanaka makes no mention to any of these polymer films.

Accordingly, Applicants respectfully assert that the rejection of claim 1 under 35 U.S.C. § 102(b) should be withdrawn because Tanaka fails to teach or suggest each feature of independent claim 1.

Furthermore, Applicants respectfully assert that the rejection of dependent claims 2, 3, 6, 8, 19-21, 23, 24, 26, 29 and 41 under 35 U.S.C. §102(b) should be withdrawn at least because of their dependence from claim 1 and the reasons set forth above, and because the dependent claims include additional features which are not taught or suggested by the prior art. Therefore, it is respectfully submitted that claims 2, 3, 6, 8, 19-21, 23, 24, 26, 29 and 41 also distinguish over the prior art.

Regarding the rejection of independent claim 64, it is noted that claim 64 has been cancelled without prejudice or disclaimer of the subject matter recited therein. Accordingly, the rejection of independent claim 64 is moot.

CONCLUSION:

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 503333.

Respectfully submitted,

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